AMENDMENTS TO THE DRAWINGS

The attached four Replacement Sheets of drawings include changes to FIGs. 1, 2, 3, and 7 and replace the original sheets including FIGs. 1, 2, 3, and 7. In FIGs. 1, 2, 3, and 7, the descriptive legend PRIOR ART has been added.

REMARKS

Claims 1-12 are pending. Claims 5 and 9 have been amended.

The objection to the drawings is noted and obviated by the Replacement Sheets for FIGs. 1, 2, 3, and 7 that are attached to this Amendment. The descriptive legend --Prior Art-- has been included in each of FIGs. 1, 2, 3, and 7.

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) for obviousness over a combination of U.S. Patents No. 6,175,587 to Madhow ("Madhow") and No. 6,996,159 to Moshavi ("Moshavi"). Neither Madhow nor Moshavi disclose all of the elements of the claims, and thus neither they nor their combination support a *prima facie* case of obviousness against claims 1-12.

The claims generally describe methods and apparatus for the reduction of multipath interference in a communication system based on the projection of an interfering path on a user's path. This projection is derived, for example, from the relative phase of the two paths and is afterwards subtracted from the user's path.

Claim 1 defines a method for reducing interpath interference between a first path and at least one other path in a channel delay estimator in a radio receiver. The method includes generating estimates of an impulse response of the first path and the at least one other path, calculating the absolute values of the estimates, and subtracting a pulse shape corresponding to the absolute value of the at least one other path from the absolute value of the estimate of the first path. The amplitude of the pulse shape is scaled in relation to an estimate of the phase difference between the first path and the at least one other path.

Claim 3 defines a method for reducing interpath interference between a first path signal and at least one other path signal in a channel delay estimator in a radio receiver. The method includes obtaining a relative phase of the first path signal and the at least one other path signal; determining, based on the relative phase, an interference component on the first path signal caused by the at least one other path signal; and removing the interference component from the first path signal.

Claims 5 and 9 define a channel delay estimator in a receiver and a mobile radio terminal having a channel delay estimator in a receiver, respectively. The channel delay estimator includes a plurality of correlators, and a signal applied to an input port of each

of the plurality of correlators produces a tuned output signal at a corresponding output port of the respective correlator. The estimator also includes means for determining an absolute value of the tuned output signal, the output port of each correlator being coupled to a corresponding input of the absolute value determining means; means for determining interference; and an adder. An output of the interference determining means and an output of the absolute value determining means are each coupled to a respective input of the adder.

Madhow discloses a method for eliminating multiple-access interference for a user of a CDMA system. Madhow calculates the orthogonal component of the user's Walsh code with respect to a plane defined by the codes of interfering paths and then uses the result to despread the received signal. Thus, Madhow renders the demodulated signal orthogonal to other users' interference. Nevertheless, Madhow does not disclose obtaining any interfering components to be subtracted out, as admitted in the Action, which looks to Moshavi for these features.

Moshavi may "improve" on Madhow by estimating interference signals to be subtracted as asserted in the Action, but Moshavi says absolutely nothing about using scaled pulse shapes based on absolute values of impulse response estimates as recited in claim 1. Moshavi also says nothing about using phase information of path signals, e.g., from despreaders, to determine an interfering component to be subtracted as recited in claim 3. Moshavi also says nothing about using the absolute values of outputs of a plurality of correlators, e.g., the fingers of a RAKE receiver, to remove interference as recited in claims 5 and 9.

Moreover, the pending claims cover reducing interpath interference, which includes self-interference that can arise from multiple signal paths of the same user. This has been clarified in claims 5 and 9. Madhow and Moshavi cannot do this. Madhow's and Moshavi's approach to calculating an orthogonal component of the user's Walsh code with respect to a plane defined by the codes of interfering paths must fail when the user's code and the interfering codes are the same.

In view of the significant differences between the claims and Madhow and Moshavi, it is believed that those documents do not support a *prima facie* case of obviousness against the claims. Thus, it is respectfully requested that the rejections be

reconsidered and withdrawn. A Notice of Allowance is respectfully solicited. If the Examiner has any questions, the undersigned attorney may be telephoned at the number given below.

Respectfully submitted,

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